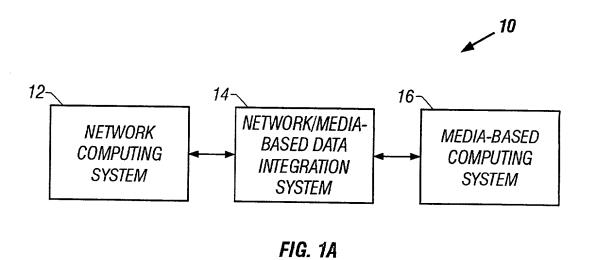
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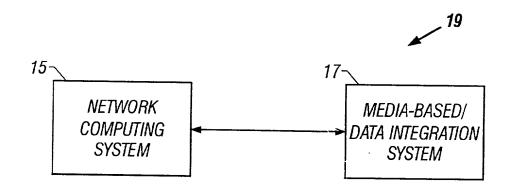
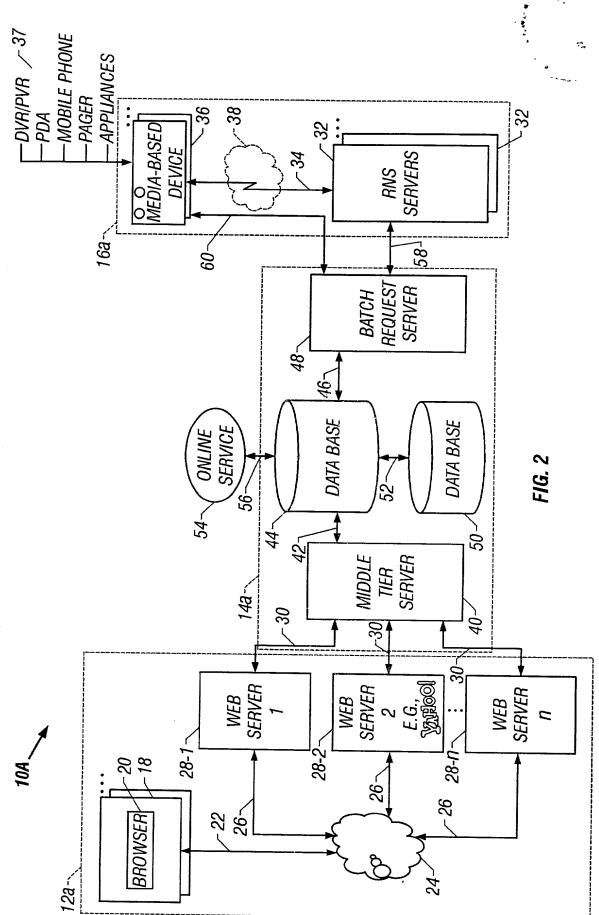


FIG. 1B

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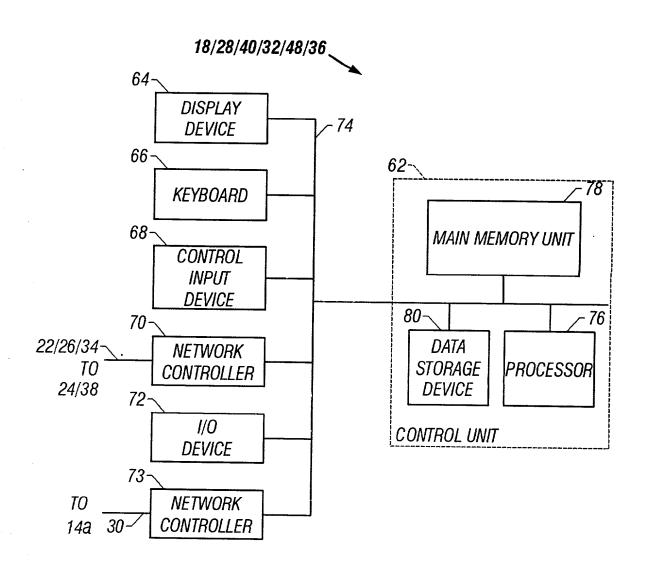


FIG. 3

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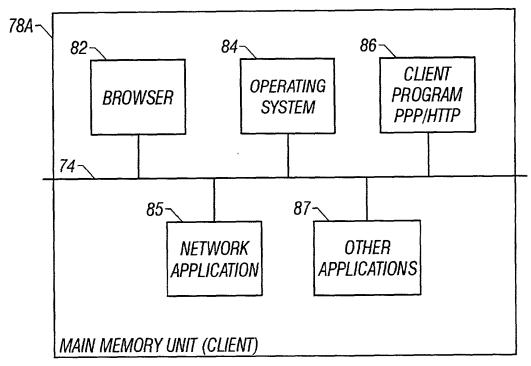


FIG. 4A

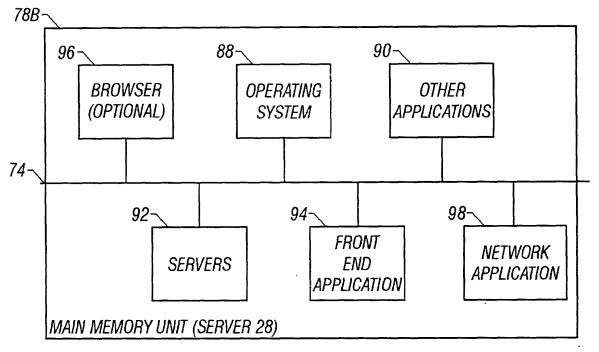


FIG. 4B

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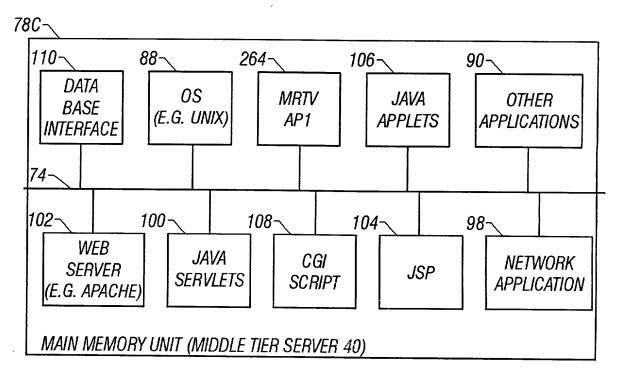


FIG. 4C

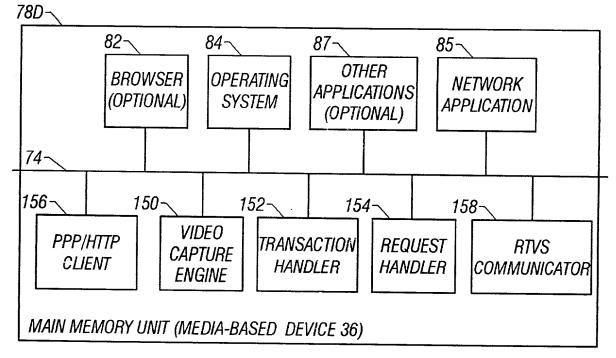
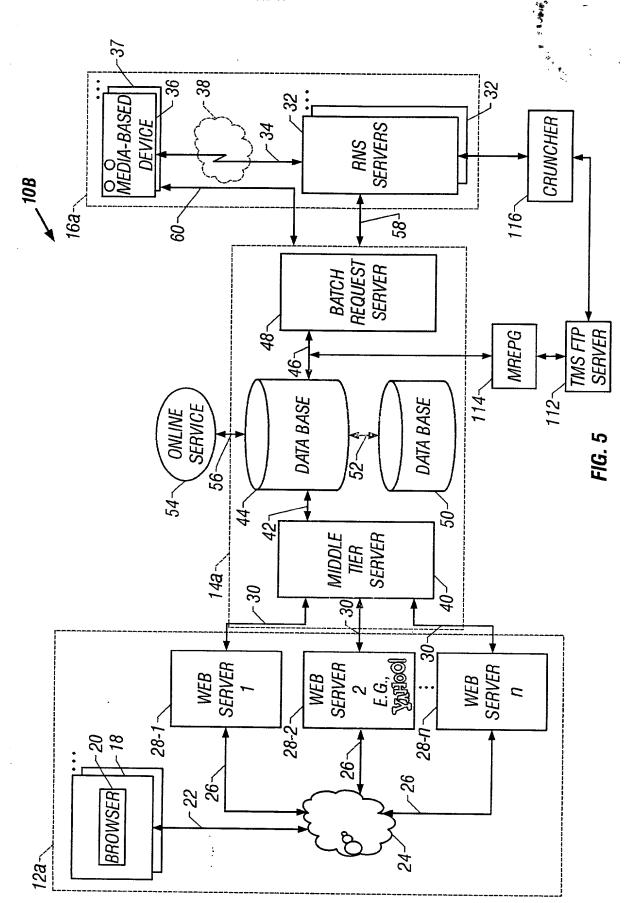


FIG. 4D

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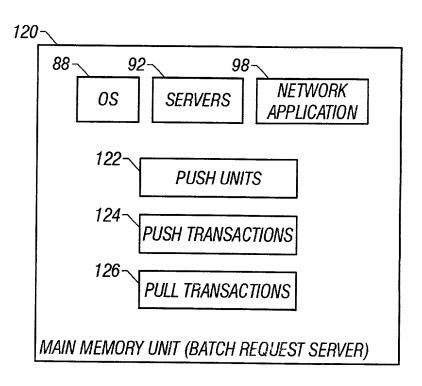


FIG. 6

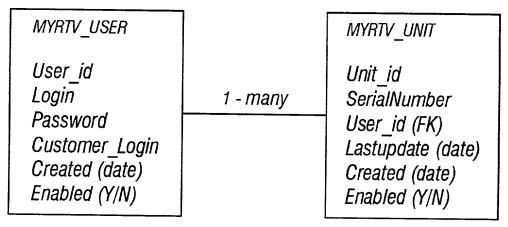


FIG. 7

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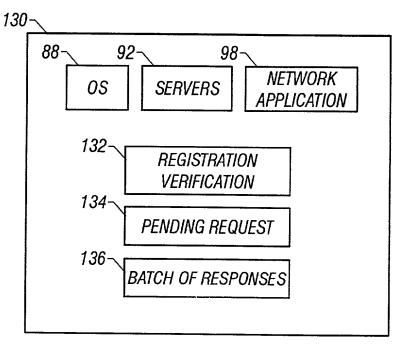


FIG. 8

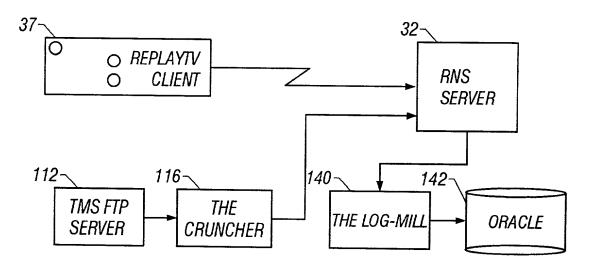
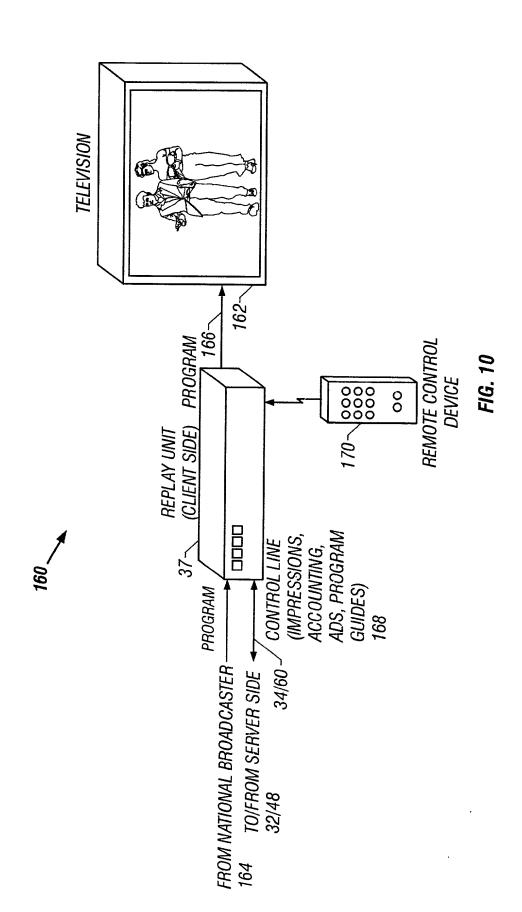


FIG. 9

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1.1.

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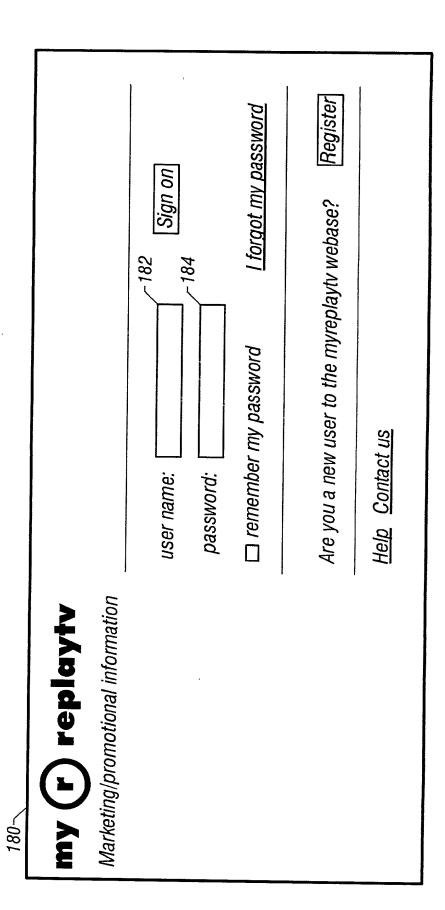


FIG. 11

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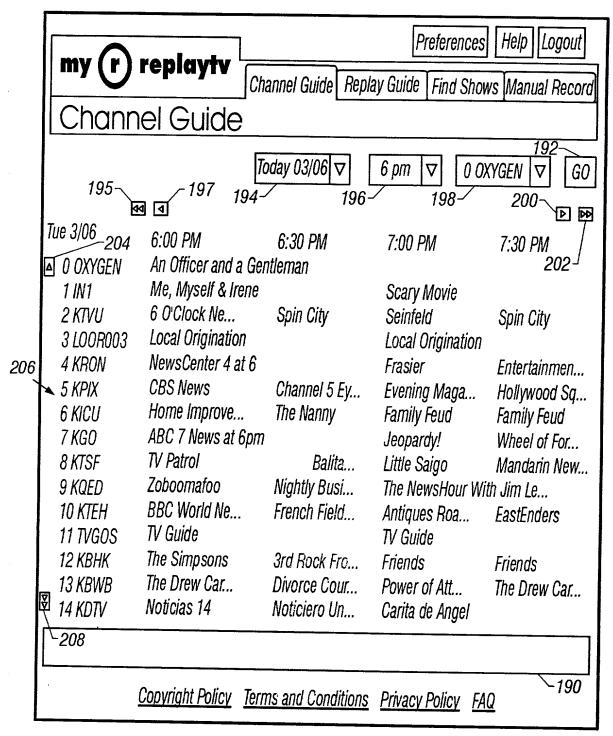


FIG. 12A

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View Description	View Description	2 KTVU \triangledown	Yesterday 8/17	4 PM 🗸 1-15	1-15 ♥
Record	Record	4 KRON	Today 8/18 ♥	5 PM	16-30
Record all episodes 。。	Record future episodes。	5 KPIX	SAT 8/19	6 PM	31-45
Record + change options	Record + change options	6 FAM	SUN 8/20	7 PM	46-60
Find all episodes	Find all episodes	7 KGO	MON 8/21	8 PM	61-75
Close	Why can't I record?	8 KRCB	TUE 8/22	9 PM	06-92
218	Close	9 КОЕО	WED 8/23	10 PM	91-105
View Description	222	10 KDTV	THU 8/24	11 PM	106-120
Find all episodes		11 KICU	FRI 8/25	12 AM	121-145
Turn off recording		12 KBHK	212 214		146
Change record options		13 KBWB		216~	
Close		14 CNN			
220	710	15 DISN			
		16 QV			

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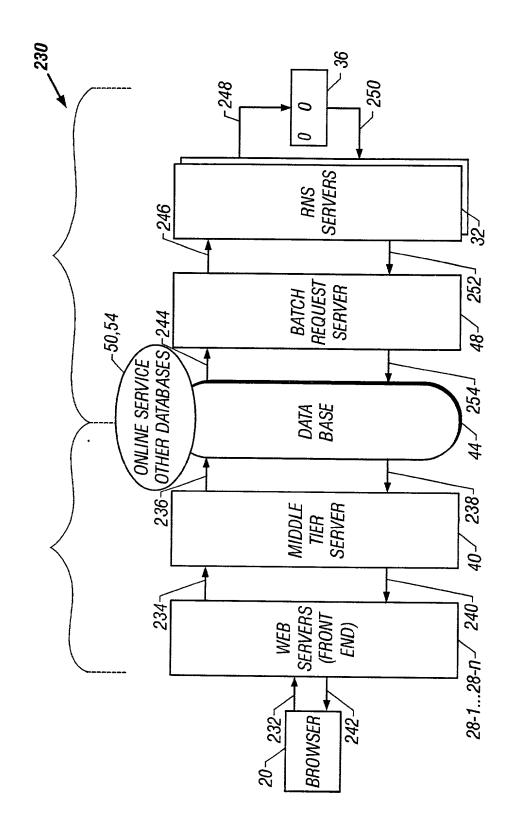


FIG. 13A

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SEQUENCE DIAGRAM

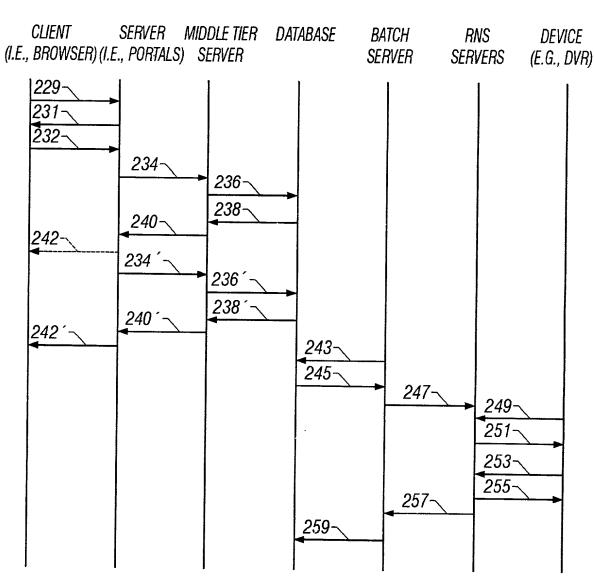


FIG. 13B

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API Routine	Function
CreateAccount	Creates an account for a new user based on the information received
Login	Tries to authenticate a user based on the input username and password combination
GetProfile	Returns the profile of the user and his units based on his userid
AddRequest	Adds a request to the unit's list of pending requests based on a set of request parameters, and returns the full status of the unit and of the pending requests, including those for recording specified show(s) and deleting recorded show(s)
DeleteRequest	Delete a request from the user list of pending requests
GetReplayGuide	Returns the Replay Guide of the unit as saved in the appropriate database for the specified unit
GetChannelLineUp	Returns the channel lineup of the unit based on the unit's setting
ChangePassword	Lets the user changes his password
GetEPG	Returns the current electronic program guide for the unit based on the settings of the unit
ShowGuide	Returns detailed information about a specified show or search show details for particular shows based on criteria given as parameters

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API Routine	Input Parameters	Output Files (Corresponding XML elements)
CreateAccount	firstname, lastname, address1, address2, city, state, zipcode, serialnumber, login, password, creator	ACCOUNT.XML REPLAYERROR.XML
Login	login, password	ACCOUNT.XML REPLAYERROR.XML
GetProfile	userid	PROFILE.XML (USERINFO, UNITINFO-1) REPLAYERROR.XML
AddRequest	userid, unitid, reqtype(none, show, theme, update) reqtype=show: showtype(single, repeat, manual single, manual repeat), headendid, tmsid, device, starttimegmt, name, durationinminutes, inputsource, quality, guaranteedrecord, numepisodes, weekdayflags, earlystartminutes, showguarminutes reqtype=theme: searchterm, searchflags, suzukiid, durationinminutes, quality, guaranteedrecord reqtype=update: updatetype(deleteshow, preserveshow, deletechannel), channelid, showid	UNITSTATUS.XML (UNITINFO, REQUESTSTATUS-I) REPLAYERROR.XML *Note: REQUESTSTATUS Result = (PENDING, SENT, SUCCESS, GENERAL FAILURE, SCHEDULEFAILURE, ROOMFAILURE)
DeleteRequest	userid, unitid, requestid	DELETERESULT.XML REPLAYERROR.XML
GetReplayGuide	userid, unitid	GUIDE.XML (REPLAYCHANNEL-I) REPLAYERROR.XML *Note: REPLAYCHANNEL Type:=(SINGLE, SINGLEMANAUL, REPEAT, REPEATMANUAL, THEME, THEMEEXACT, ZONE)
GetChannelLineUp	userid, unitid	CHANNELLINEUP.XML (CHANNEL-I) REPLAYERROR.XML
ChangePassword	userid, currentpassword, newpassword	ACCOUNT.XML REPLAYERROR.XML
GetEPG	userid, unitid, starttimegmt, durationinminutes, startchannel, channelcount	XML file based on tvguide dtd & tvprograms dtd REPLAYERROR XML
ShowGuide	userid, unitid, query, start, count, levelofdetail *Note: query keywords include actor, advisory, desc, mpaarating, title, etc.	XML file based on tvguide.dtd & tvprograms.dtd REPLAYERROR.XML

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460

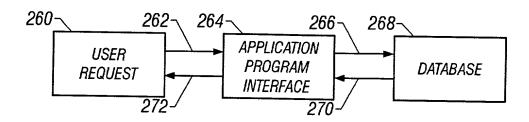


FIG. 16A

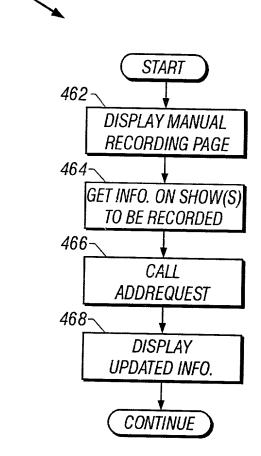


FIG. 25

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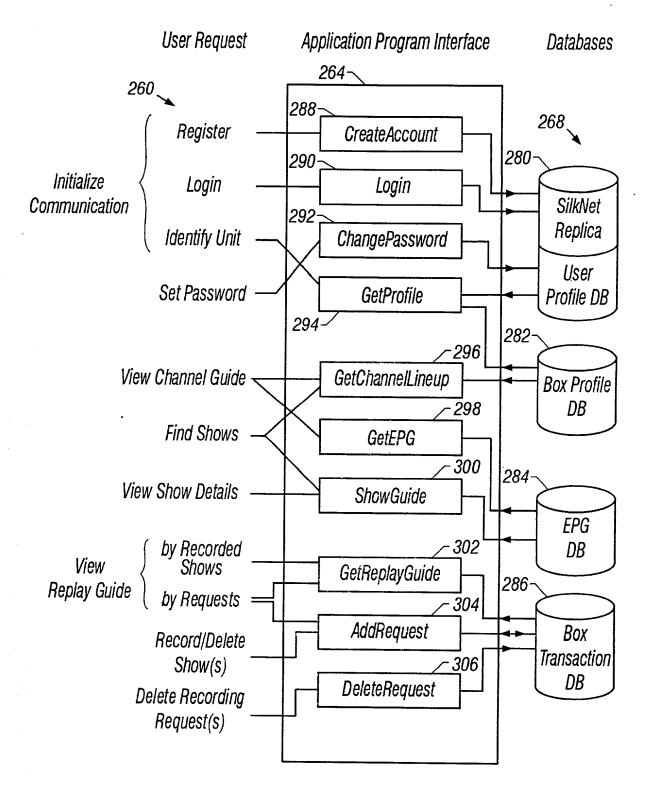
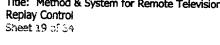


FIG. 16B

Inventors: Millard E. Sweatt III et al.

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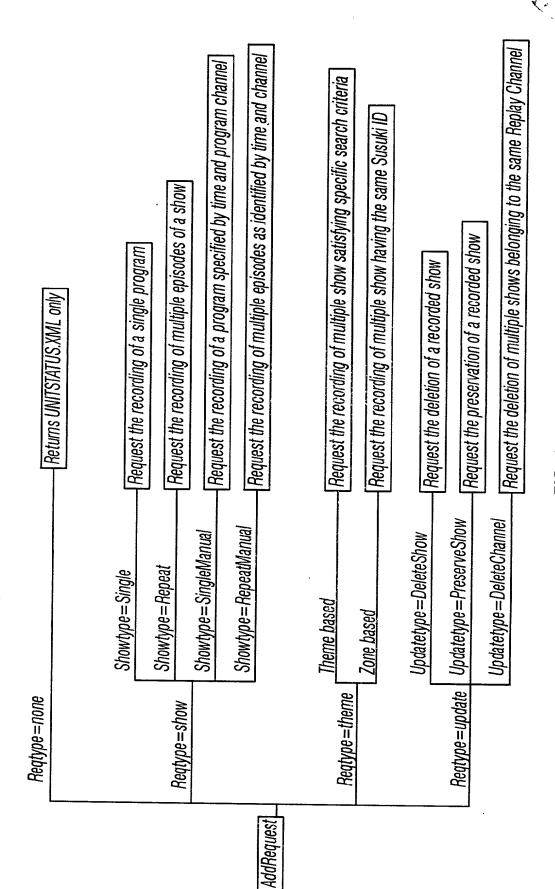


FIG. 17

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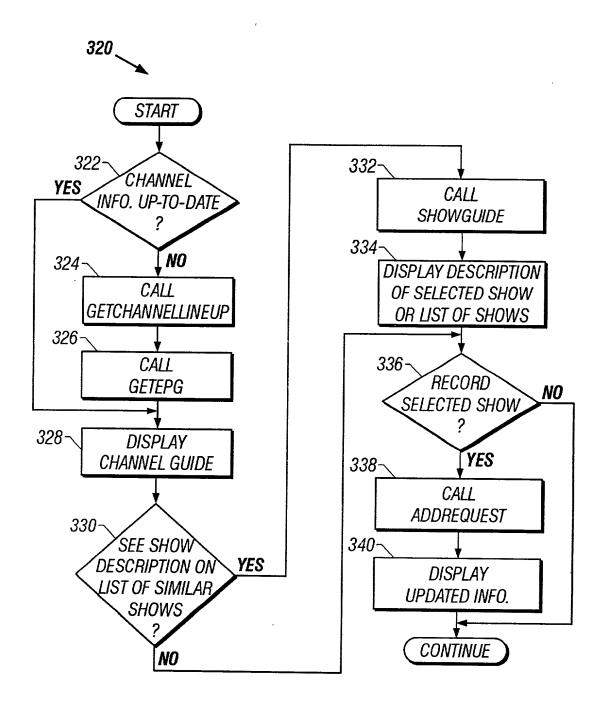


FIG. 18

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			-		
my (r) rep	laytv		<i>E</i>	Preferences	Help Logout
, () ick		Channel Guide	Replay Guide	Find Shows	Manual Record
Replay G	uide				
Replay Shows Repl	ay Channe	IS			350
Review and edit your one time and recurring Replay TV requests Delete Selected Channels					
Channel	Details	S		Status	Request
□ A Fistful of Dollars	schedul from Ch or arour Guarant	gle record Replay led to record A Fis nannel 21 (TBS) or nd 7:00AM - 9:00 eed at EXTENDED else is scheduled	stful of Dollars 1 Sun, 02/18 at AM. 1 quality.	•	Date 02/18
□ Blown Away	schedulo Channel around 9 at EXTEN	gle record Replay ed to record Blow 42(USAP) on Tue 9:00PM - 11:30PI IDED quality. Not ed to record.	n Away from e, 01/16 at or M. Guaranteed	1	01/16
□ Cantonese News	continuo episode(every (Si Channel	w-based Replay Jusly record the 1 S) of Cantonese I Jun, Mon, Tue, We 8(KTSF) at or aro Deed at EXTENDED	most current News occurring d, Thu, Fri, Sat und 8:00PM - 1	on	02/28
□ Captain January	schedule Channel - 3:30AM -	le record Replay d to record Capta 49(AMC) on Tue, 5:00AM. Guara else is scheduled	ain January froi 01/09 at or arc nteed at EXTEN	ound	01/09

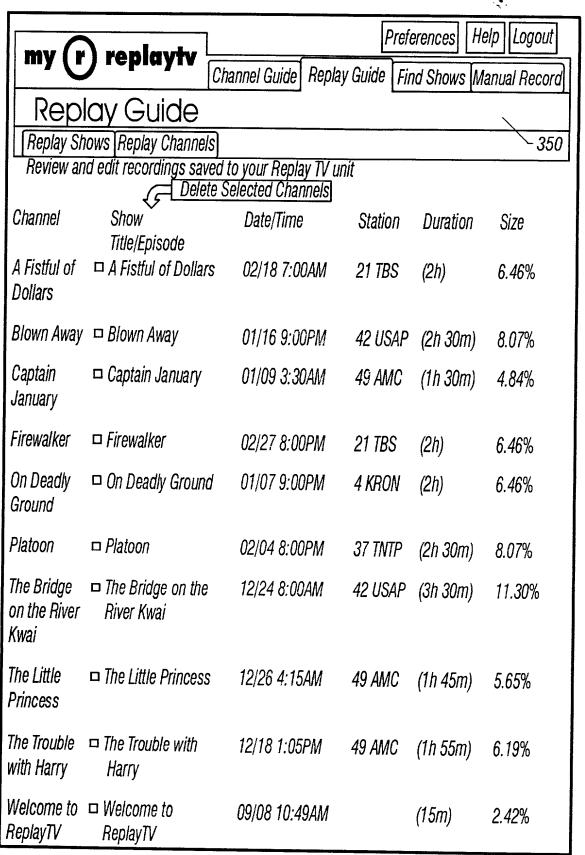
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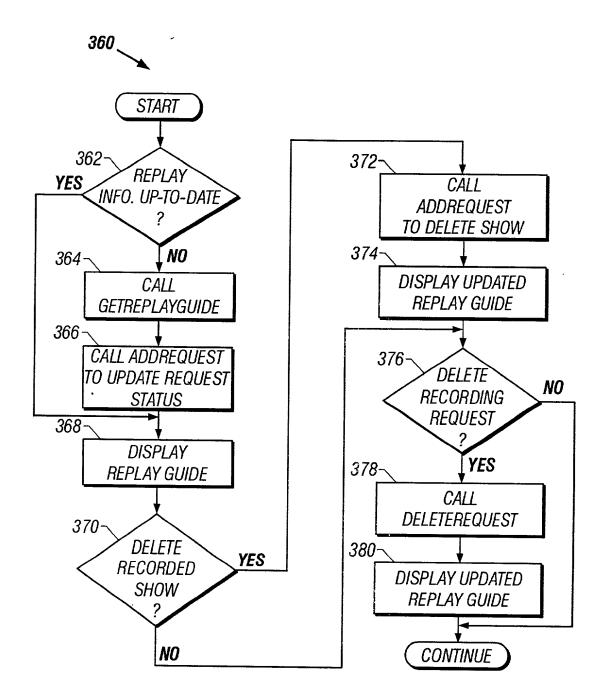


FIG. 20

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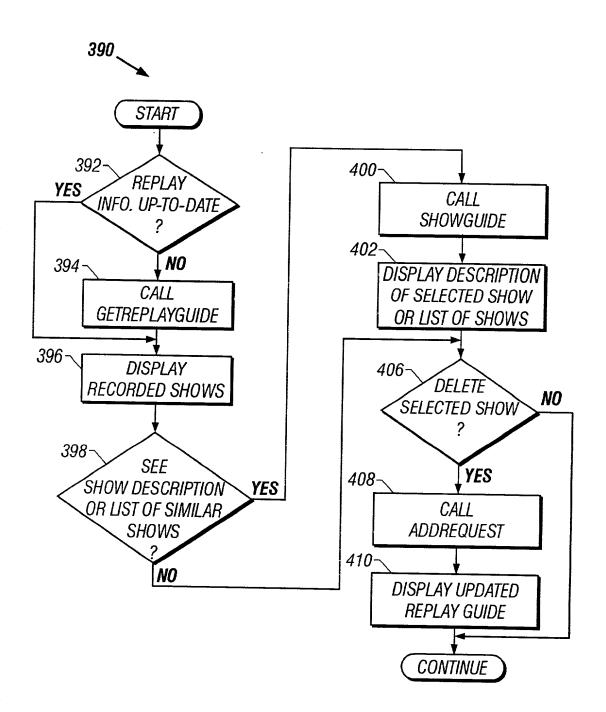


FIG. 21

The first for many days for the first first first p =54 I'm and the time **APPLICATION NO: 09/925,109**

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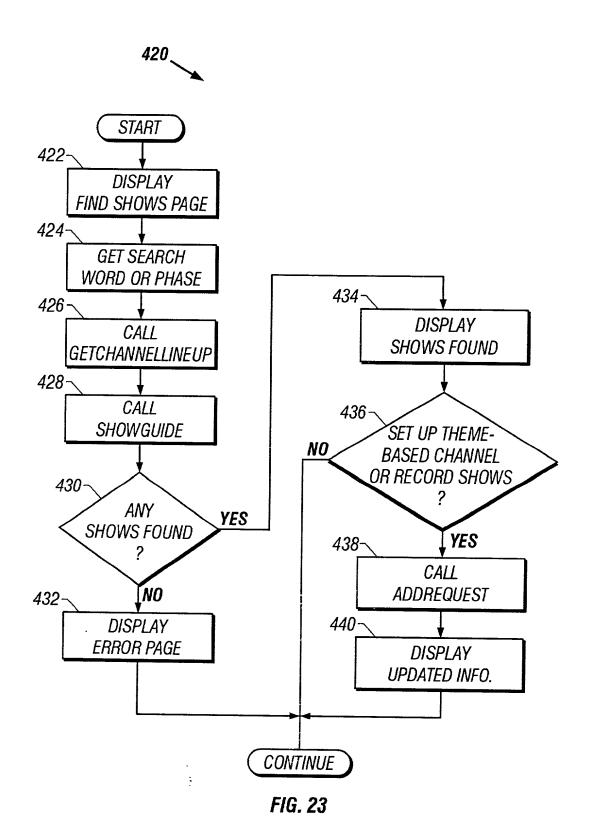
Channel Guide Replay Guide Find Shows Manual Record Find Shows Help || Logout Preferences Copyright Policy Terms and Conditions Privacy Policy FAQ □ Directors □ Actors in these categories: Descriptions Show Titles Enter the word or phrase that you (r) replaytv Find Shows wish to find. Find:

FIG. 22

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Manual Record Logout Help Preferences FAO Channel Guide Replay Guide Find Shows Privacy Policy Copyright Policy Terms and Conditions | Recording duration: 2001 0 Submit Request Single Recording Repeat Recording Manual Record my (r) replaytv 7 0 Start Time : | AM| End Time : | AM| O OXYGEN | Extended Start Date Mar ablaGuaranteed Yes | v Channe! Quality

FIG. 24A

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3h 45m available at medium quality Preferences Help Logout as of last connection Manual Record | Replay Guide End Time 17:02 PIM = □ Sun Channel Guide | Find Shows □ Sat □Mon vaTue □Wed □Thu □Fri Single Recording Repeat Recording Manual Record (r) replaytv Start Time 7:58 PM Standard 4 KRON Guaranteed Yes ∇ Submit Request Channel Channel Quality Days

452.

FIG. 24B

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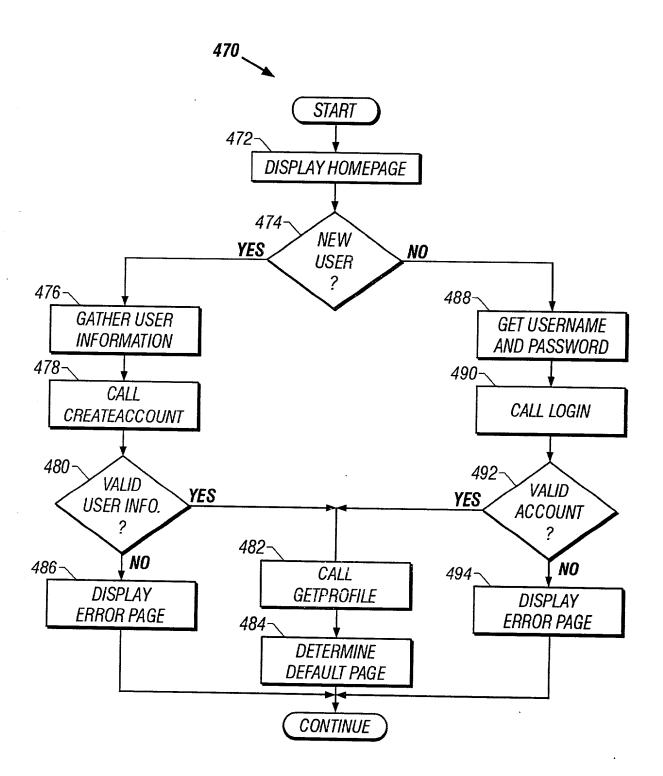


FIG. 26

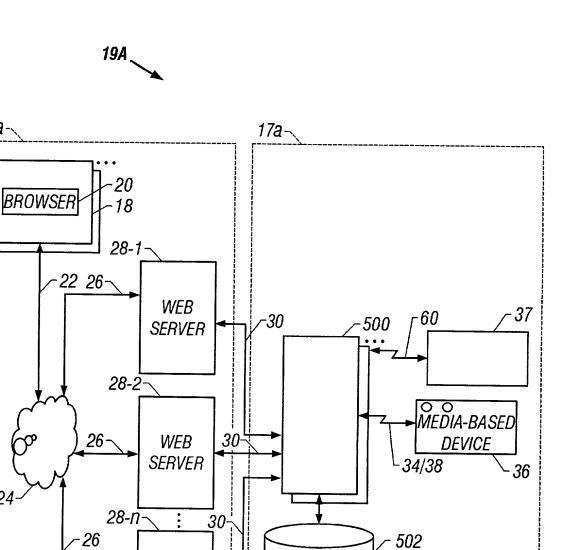
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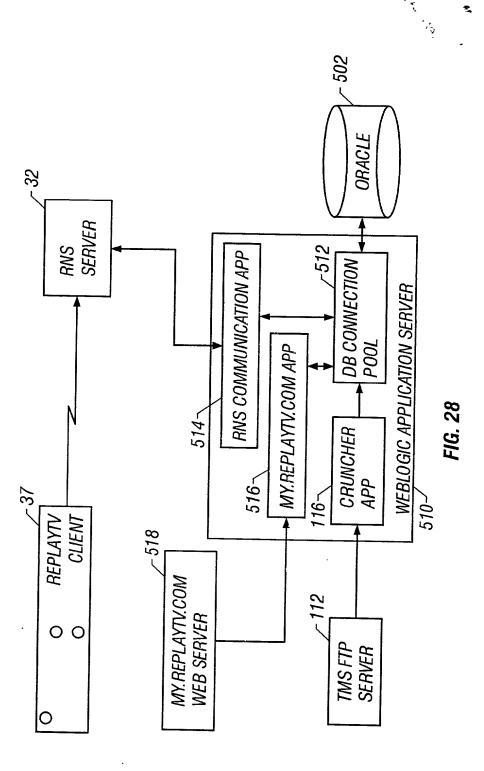


DATA BASE

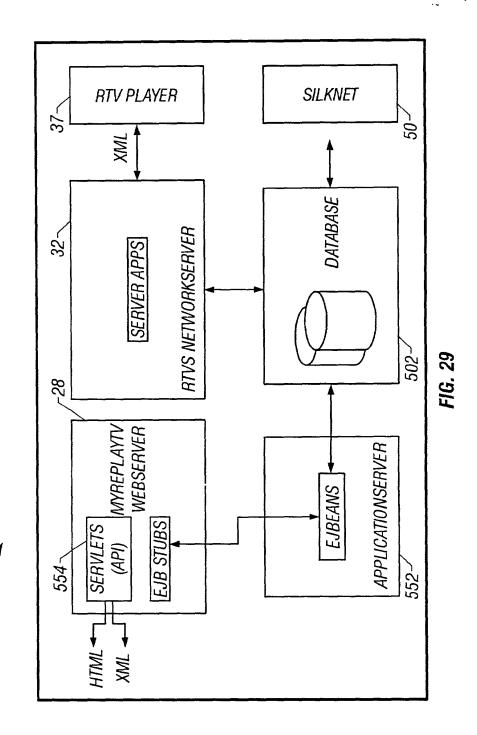
FIG. 27

WEB SERVER

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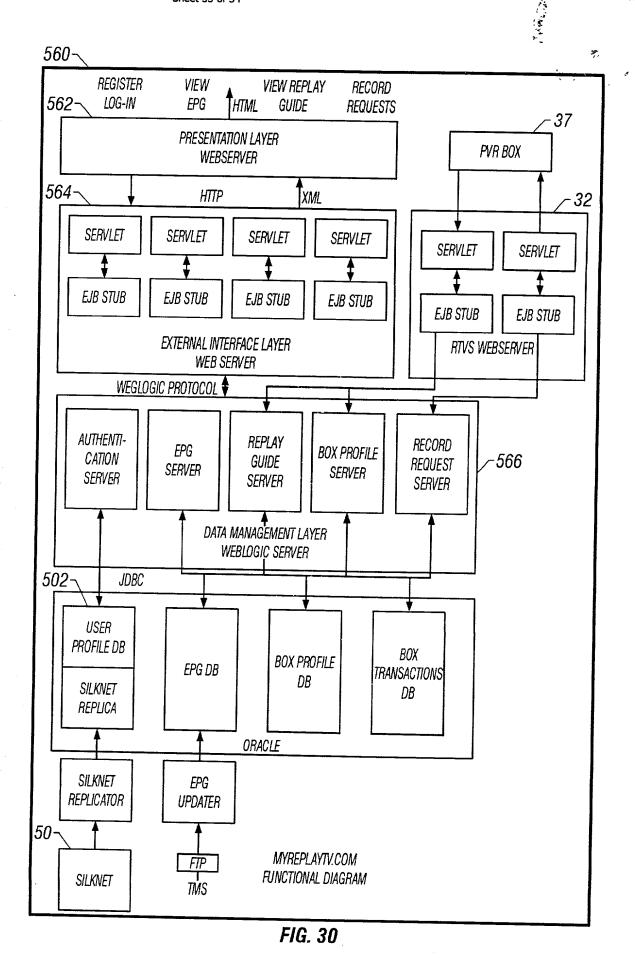
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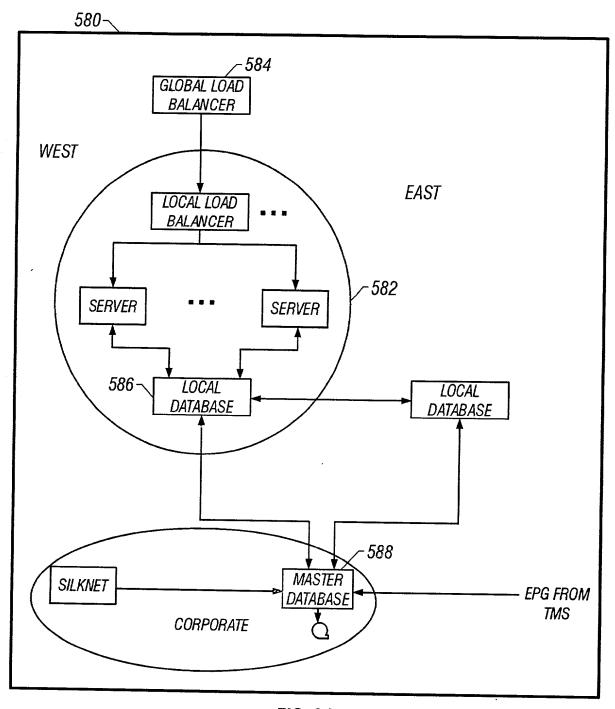


FIG. 31